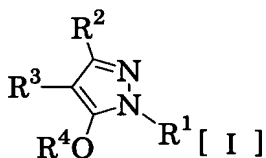


Claims

1. A pyrazole derivative represented by the general formula [I] or a salt thereof:



wherein R¹ represents a C1 to C6 alkyl group, R² represents a C1 to C3 haloalkyl group, R³ represents a hydrogen atom, a C1 to C3 alkyl group which may be substituted with one or more substituents selected from the following substituent group α , or a formyl group, R⁴ represents a hydrogen atom or a C1 to C3 haloalkyl group, provided that R⁴ represents a C1 to C3 haloalkyl group in the case that R³ is a hydrogen or a formyl group and R⁴ is a hydrogen group or a C1 to C3 haloalkyl group in the case that R³ is a C1 to C3 alkyl group which may be substituted with one or more substituents selected from the following substituent group α ;

"Substituent group α "

halogen atoms, -SH group, -SC(=NH)NH₂ group

2. The pyrazole derivative or salt thereof according to claim 1, wherein R⁴ is a C1 to C3 haloalkyl group.

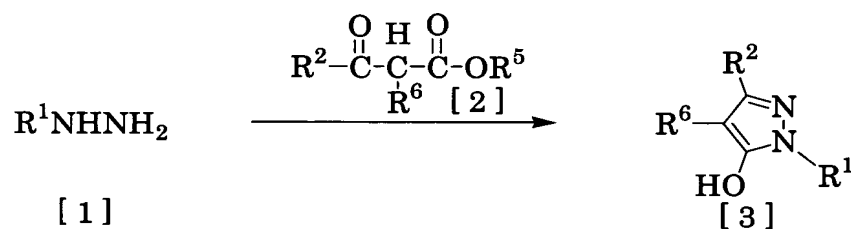
3. The pyrazole derivative or salt thereof according to claim 1, wherein R³ is a C1 to C3 alkyl group and R⁴ is a hydrogen atom.

4. The pyrazole derivative or salt thereof according to claim 1, wherein R³ is a methyl group which may

be substituted with one or more substituents selected from the substituent group α .

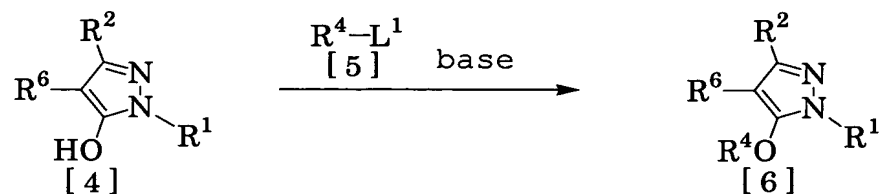
5. The pyrazole derivative or salt thereof according to claim 1, wherein R^3 is a methyl group.

6. A process for producing a pyrazole derivative represented by the general formula [3], comprising a step of reacting a compound represented by the general formula [1] with a compound represented by the general formula [2]:



wherein R^1 and R^2 represent the same meanings as mentioned above, R^5 represents a C1 to C3 alkyl group, a phenyl group which may be substituted, or a benzyl group which may be substituted, and R^6 represents a C1 to C3 alkyl group.

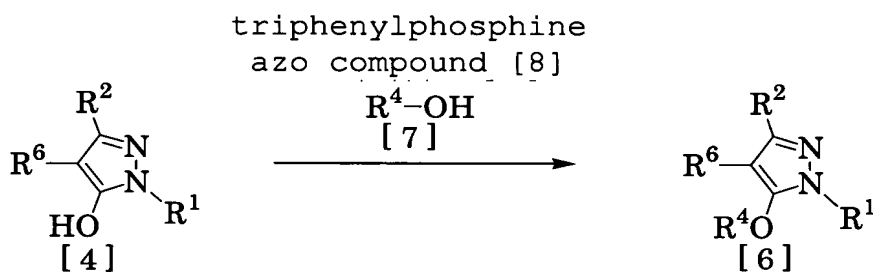
7. A process for producing a pyrazole derivative represented by the general formula [6], comprising a step of reacting a compound represented by the general formula [4] with a compound represented by the general formula [5] in the presence of a base:



wherein R^1 , R^2 , R^4 , and R^6 represent the same meanings as mentioned above, and L^1 is a leaving group which is more

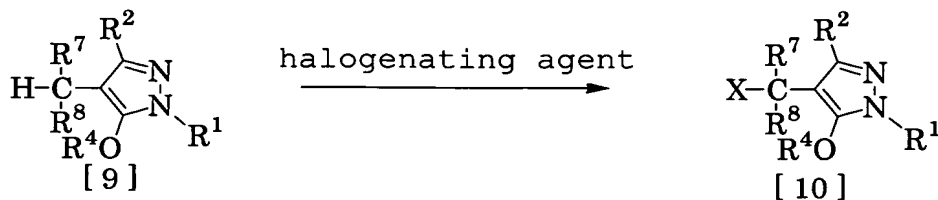
reactive than a halogen atom remaining after haloalkylation and represents a halogen atom, a C1 to C3 alkylsulfonyloxy group, a C1 to C3 haloalkylsulfonyloxy group, a phenylsulfonyloxy group which may be substituted, or a benzylsulfonyloxy group which may be substituted, and the like.

8. A process for producing a pyrazole derivative represented by the general formula [6], comprising a step of reacting a compound represented by the general formula [4] with triphenylphosphine, a compound represented by the general formula [7], and an azo compound [8]:



wherein R¹, R², R⁴, and R⁶ represent the same meanings as mentioned above.

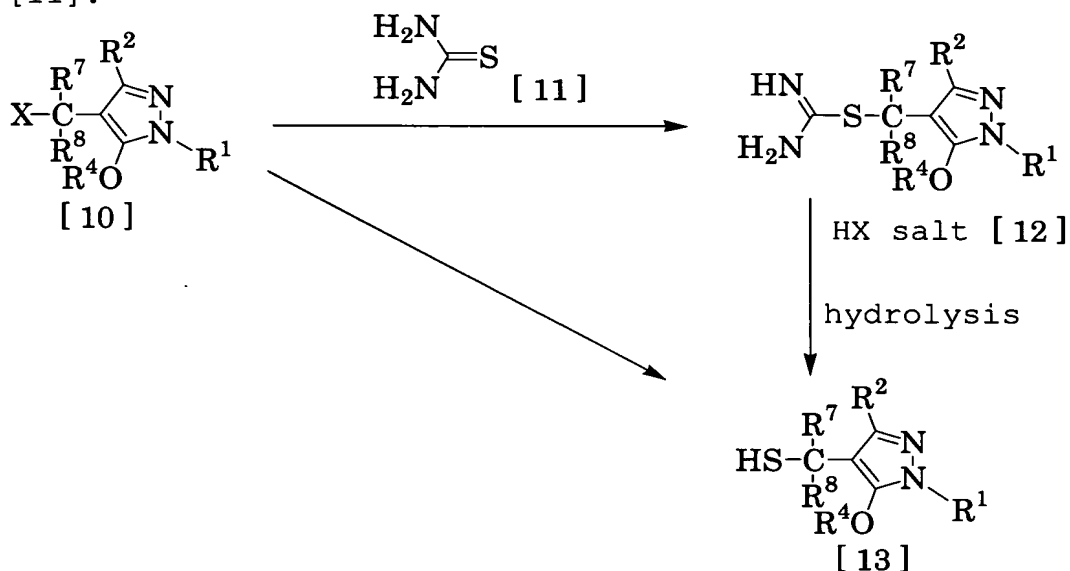
9. A process for producing a pyrazole derivative represented by the general formula [10], comprising a step of reacting a compound represented by the general formula [9] with a halogenating agent:



wherein R¹, R², and R⁴ represent the same meanings as mentioned above, R⁷ and R⁸ each represents a hydrogen atom or

a C1 to C2 alkyl group, and X is a halogen atom.

10. A process for producing a pyrazole derivative represented by the general formula [12], comprising a step of reacting a compound represented by the general formula [10] with a compound represented by the general formula [11]:



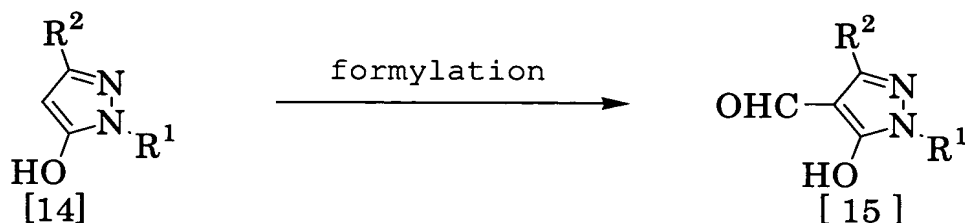
wherein R^1 , R^2 , R^4 , R^7 , R^8 , and X represent the same meanings as mentioned above.

11. The process for producing a pyrazole derivative represented by the general formula [13] according to claim 10, wherein the compound represented by the general formula [12] according to the above (10) is hydrolyzed.

12. The process for producing a pyrazole derivative represented by the general formula [13] according to claim 10, wherein the compound represented by the general formula [10] according to the above (10) is reacted with a sulfide.

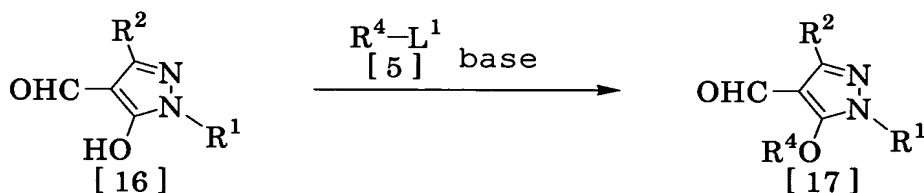
13. A process for producing a pyrazole derivative

represented by the general formula [15], comprising a step of formylating a compound represented by the general formula [14]:



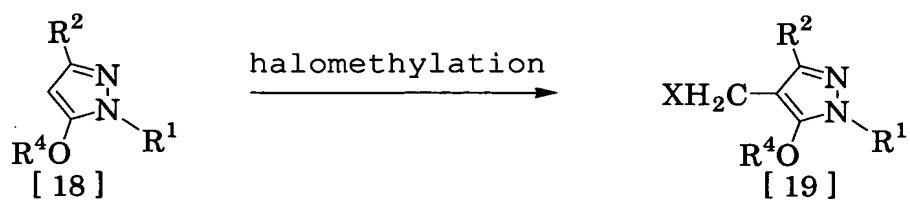
wherein R^1 and R^2 represent the same meanings as mentioned above.

14. A process for producing a pyrazole derivative represented by the general formula [17], comprising a step of reacting a compound represented by the general formula [16] with a compound represented by the general formula [5] in the presence of a base:



wherein R^1 , R^2 , R^4 , and L^1 represent the same meanings as mentioned above.

15. A process for producing a pyrazole derivative represented by the general formula [19], comprising a step of halomethylating a compound represented by the general formula [18]:



wherein R¹, R², R⁴, and X represent the same meanings as mentioned above.